

CLAIMS

1. A vacuum pump, comprising

a pump unit (14) with a pumping set (16), and

an operating unit (12) being connected with the pump unit (14) for controlling it and arranged spaced from the pump unit (14),

characterized in

that the pump unit (14) and the operating unit (12) respectively comprise a transceiver module (20,22) for transmitting and receiving control and operational data bidirectionally in a wireless manner, the pump unit (14) and the operating unit (12) being exclusively connected with each other in a wireless manner.

2. The vacuum pump of claim 1, characterized in that the pump unit (14) comprises a pump control (40) and a supervisory module (42) for continuous supervision of the transceiver module (20), the pump control (40) switching the pumping set (16) to a safety mode when the supervisory module (42) signals an interruption of the reception of a control signal continuously transmitted by the transceiver module (22) of the operating unit (12).
3. The vacuum pump of claim 2, characterized in that the operating unit (12) comprises a supervisory module (44) continuously supervising the reception of the transceiver module (22) and continuously inducing the transmission of the control signal to the pump unit (14) when a fault-free reception is detected.

4. The vacuum pump of one of claims 1 - 3, characterized in that the transceiver modules (20,22) are radio modules via which a radio link between the pump unit (14) and the operating unit (12) exists.
5. The vacuum pump of one of claims 1 - 3, characterized in that the transceiver modules are infrared modules via which an infrared link between the pump unit (14) and the operating unit (12) exists.
6. The vacuum pump of one of claims 1 - 5, characterized in that the pump unit (14) or the operating unit (12) comprises a wireless telephone module (34).
7. The vacuum pump of one of claims 1 - 4, characterized in that the pump unit (14) or the operating unit (12) comprises a position determination module (26).
8. A method for controlling a vacuum pump (10) comprising a pump unit (14) with a pumping set (16) and an operating unit (12) arranged spaced from the pump unit (14), the pump unit (14) and the operating unit (12) being connected with each other bidirectionally and exclusively in a wireless manner, with the method steps of:
 - continuously transmitting from the pump unit (14) to the operating unit (12) and vice versa,
 - continuously supervising the reception in the pump unit (14) and in the operating unit (12), and
 - operating the pumping set (16) in a safety mode when an

interruption of the continuous reception in the pump unit (14) and/or in the operating unit (12) is detected.

9. The method of claim 8, characterized by the method steps of

- continuously transmitting a control signal from the operating unit (12) to the pump unit (14) as long as a fault-free reception in the operating unit (12) is detected,
- continuously supervising the reception of the control signal in the pump unit (14), and
- operating the pumping set (16) in a safety mode when no control signal is received.